

## § 250.907

the shallow hazard and geologic surveys, the Regional Supervisor may require you to perform a subsurface survey. This survey will include a testing program for investigating the stratigraphic and engineering properties of the soil that may affect the foundations or anchoring systems for your facility. The testing program must include adequate in situ testing, boring, and sampling to examine all important soil and rock strata to determine its strength classification, deformation properties, and dynamic characteristics. If required to perform a subsurface survey, you must prepare and submit to the Regional Supervisor a summary report to briefly describe the results of your soil testing program, the various field and laboratory test methods employed, and the applicability of these methods as they pertain to the quality of the samples, the type of soil, and the anticipated design application. You must explain how the engineering properties of each soil stratum affect the design of your platform. In your explanation you must describe the uncertainties inherent in your overall testing program, and the reliability and applicability of each test method.

(d) *Overall site investigation report.* You must prepare and submit to the Regional Supervisor an overall site investigation report for your platform that integrates the findings of your shallow hazards surveys and geologic surveys, and, if required, your subsurface surveys. Your overall site investigation report must include analyses of the potential for:

- (1) Scouring of the seafloor;
- (2) Hydraulic instability;
- (3) The occurrence of sand waves;
- (4) Instability of slopes at the platform location;

If . . .

- (1) There is sufficient structural redundancy to prevent catastrophic failure of the platform or structure under consideration,
- (2) There is not sufficient structural redundancy to prevent catastrophic failure of the platform or structure,
- (3) The desirable degree of redundancy is significantly reduced as a result of fatigue damage,

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(5) Liquefaction, or possible reduction of soil strength due to increased pore pressures;

(6) Degradation of subsea permafrost layers;

(7) Cyclic loading;

(8) Lateral loading;

(9) Dynamic loading;

(10) Settlements and displacements;

(11) Plastic deformation and formation collapse mechanisms; and

(12) Soil reactions on the platform foundations or anchoring systems.

### § 250.907 Where must I locate foundation boreholes?

(a) For fixed or bottom-founded platforms and tension leg platforms, your maximum distance from any foundation pile to a soil boring must not exceed 500 feet.

(b) For deepwater floating platforms which utilize catenary or taut-leg moorings, you must take borings at the most heavily loaded anchor location, at the anchor points approximately 120 and 240 degrees around the anchor pattern from that boring, and, as necessary, other points throughout the anchor pattern to establish the soil profile suitable for foundation design purposes.

### § 250.908 What are the minimum structural fatigue design requirements?

(a) API RP 2A-WSD, Recommended Practice for Planning, Designing and Constructing Fixed Offshore Platforms (as incorporated by reference in § 250.198), requires that the design fatigue life of each joint and member be twice the intended service life of the structure. When designing your platform, the following table provides minimum fatigue life safety factors for critical structural members and joints.

Then . . .

The results of the analysis must indicate a maximum calculated life of twice the design life of the platform.

The results of a fatigue analysis must indicate a minimum calculated life or three times the design life of the platform.

The results of a fatigue analysis must indicate a minimum calculated life of three times the design life of the platform.

(b) The documents incorporated by reference in § 250.901 may require larger

safety factors than indicated in paragraph (a) of this section for some key

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components. When the documents incorporated by reference require a larger safety factor than the chart in paragraph (a) of this section, the requirements of the incorporated document will prevail.

### PLATFORM VERIFICATION PROGRAM

#### § 250.909 What is the Platform Verification Program?

The Platform Verification Program is the BSEE approval process for ensuring that floating platforms; platforms of a new or unique design; platforms in seismic areas; or platforms located in deepwater or frontier areas meet stringent requirements for design and construction. The program is applied during construction of new platforms and major modifications of, or repairs to, existing platforms. These requirements are in addition to the requirements of the Platform Approval Program described in §§ 250.904 through 250.908 of this subpart.

#### § 250.910 Which of my facilities are subject to the Platform Verification Program?

(a) All new fixed or bottom-founded platforms that meet any of the following five conditions are subject to the Platform Verification Program:

- (1) Platforms installed in water depths exceeding 400 feet (122 meters);
- (2) Platforms having natural periods in excess of 3 seconds;
- (3) Platforms installed in areas of unstable bottom conditions;
- (4) Platforms having configurations and designs which have not previously been used or proven for use in the area; or
- (5) Platforms installed in seismically active areas.

(b) All new floating platforms are subject to the Platform Verification Program to the extent indicated in the following table:

If . . .	Then . . .
(1) Your new floating platform is a buoyant offshore facility that does not have a ship-shaped hull,	The entire platform is subject to the Platform Verification Program including the following associated structures: <ol style="list-style-type: none"> <li>(i) Drilling, production, and pipeline risers, and riser tensioning systems (each platform must be designed to accommodate all the loads imposed by all risers and riser does not have tensioning systems);</li> <li>(ii) Turrets and turret-and-hull interfaces;</li> <li>(iii) Foundations, foundation pilings and templates, and anchoring systems; and</li> <li>(iv) Mooring or tethering systems.</li> </ol>
(2) Your new floating platform is a buoyant offshore facility with a ship-shaped hull,	Only the following structures that may be associated with a floating platform are subject to the Platform Verification Program: <ol style="list-style-type: none"> <li>(i) Drilling, production, and pipeline risers, and riser tensioning systems (each platform must be designed to accommodate all the loads imposed by all risers and riser tensioning systems);</li> <li>(ii) Turrets and turret-and-hull interfaces;</li> <li>(iii) Foundations, foundation pilings and templates, and anchoring systems; and</li> <li>(iv) Mooring or tethering systems.</li> </ol>

(c) If a platform is originally subject to the Platform Verification Program, then the conversion of that platform at that same site for a new purpose, or making a major modification of, or major repair to, that platform, is also subject to the Platform Verification Program. A major modification includes any modification that increases loading on a platform by 10 percent or more. A major repair is a corrective operation involving structural members

affecting the structural integrity of a portion or all of the platform. Before you make a major modification or repair to a floating platform, you must obtain approval from both the BSEE and the USCG.

(d) The applicability of Platform Verification Program requirements to other types of facilities will be determined by BSEE on a case-by-case basis.